

**IN THE CLAIMS**

Please cancel non-elected claims 1-16, 18-31, 41, and 47-52, without prejudice.  
Please add the new claims 53 and 54. The following listing of claims replaces all prior listings.

1-16 (Canceled).

17. (Currently amended) A method for analyzing ~~determining in~~ a plurality of proteomic mixtures ~~the presence of active target members of a group of related proteins in each of said proteomic mixtures, said related proteins related in having a common functionality for conjugation at an active site,~~ said method comprising:

(a) combining each of said ~~proteomic~~ mixtures with at least one activity-based probe, wherein:

(a1) each mixture includes a group of related proteins, the group comprising active target members;

(a2) said probe(s) includes a functionality allowing conjugation of said probe to said target members,

whereby said probe(s) is conjugated to said target member comprising a reactive functionality specific for said active site when active, under conditions for conjugation of said probe(s) to said target members to form an adduct; and

(b) determining the presence of said target members conjugated with said probe adduct in each of said proteomic mixtures;

whereby the presence of said target members conjugated to said probe(s) adduct in said proteomic mixtures is indicative of the presence of active target members in said mixtures, wherein said related proteins include a common functionality for conjugation at an active site.

18-31. (Canceled)

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